JDAVIS

I/I STUDIO
for architecture and neighborhood design

Southern Gateway Corridor Study

ISSUES AND OPPORTUNITIES REPORT

AUGUST 2015

INTRODUCTION

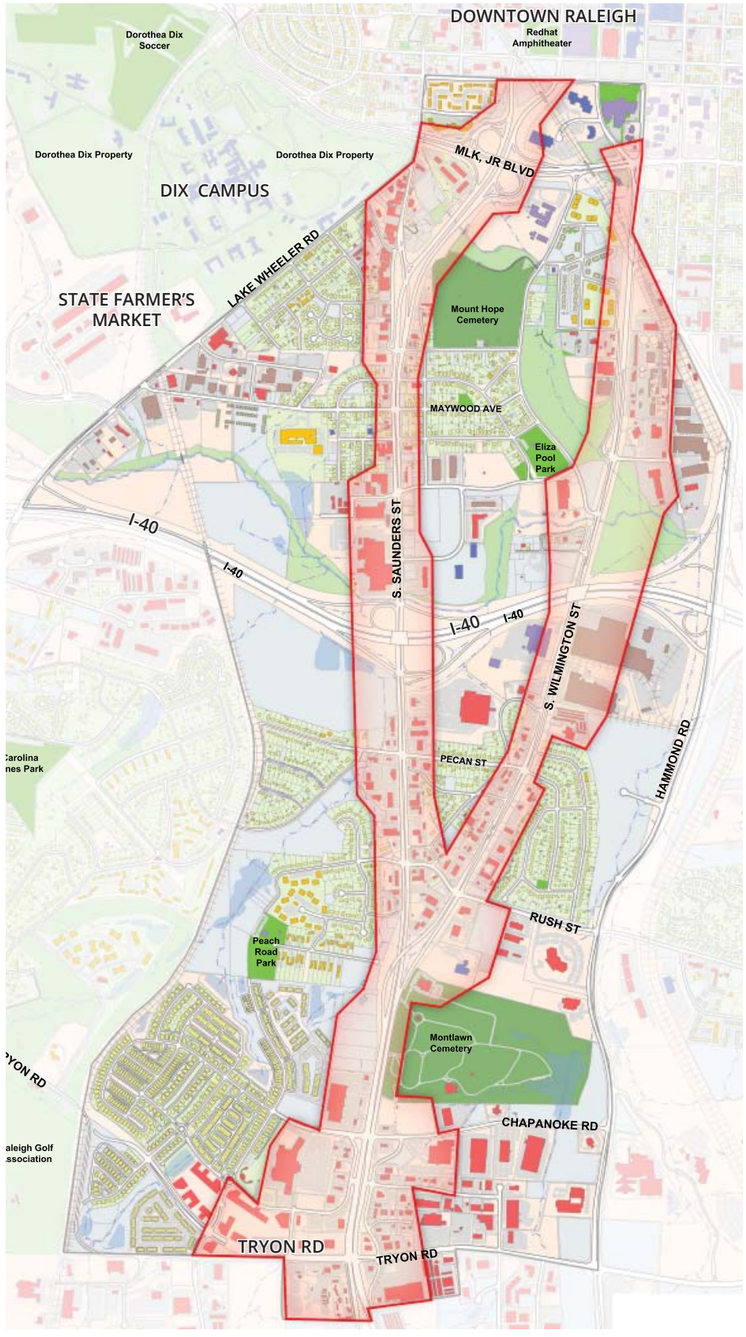
In March of 2015, the City of Raleigh's Urban Design Center embarked on Phase 2 of the Southern Gateway Corridor Study. This corridor includes a significant part of the South Saunders and South Wilmington Street corridors from the southern edge of Downtown Raleigh to Tryon Road.

The multi-disciplinary consultant team, led by JDavis, is responding to specific directives that emerged from the 2013 Vision Document authored by the Urban Design Center. These directives form a series of design principles for this project:

- **Build on the Vision Document** by revisiting and refining the 2013 vision statement through identification of district sub-areas.
- **Implement an effective and targeted community outreach** by conducting mobile work sessions and focusing on involving business owners and investors within the corridor.
- **Establish an identity for the corridor** by setting expectations for design excellence and establishing clear design principles.
- **Emphasize market-driven development opportunities** by identifying outmoded/underutilized properties, categorizing catalytic projects based on market assessment, and leveraging the study area's proximity to Downtown.
- **Identify strategic infrastructure investments** by targeting early investment opportunities, pairing public investment with private development, and determining the most cost-effective infrastructure improvements.
- **Integrate transportation and transit improvements with appropriate urban design typologies and land use recommendations** by identifying and supporting alternate modes of travel for viable development types and studying alternatives for strategic redevelopment areas.
- **Strengthen connections to established neighborhoods** within and around the corridor by identifying opportunities for improving secondary street network and off-road connections to support alternate modes of travel.
- **Provide detailed implementable solutions** by establishing a design tool kit and creating opportunities for short term "wins".

In addition to the principles listed above it is the goal of the consultant team to recommend design solutions that align with and complement the strategies for connectivity, infrastructure investment, and public realm to support growth and development as presented in the Raleigh Downtown Plan.

INTRODUCTION



SOUTHERN GATEWAY CORRIDOR STUDY AREA

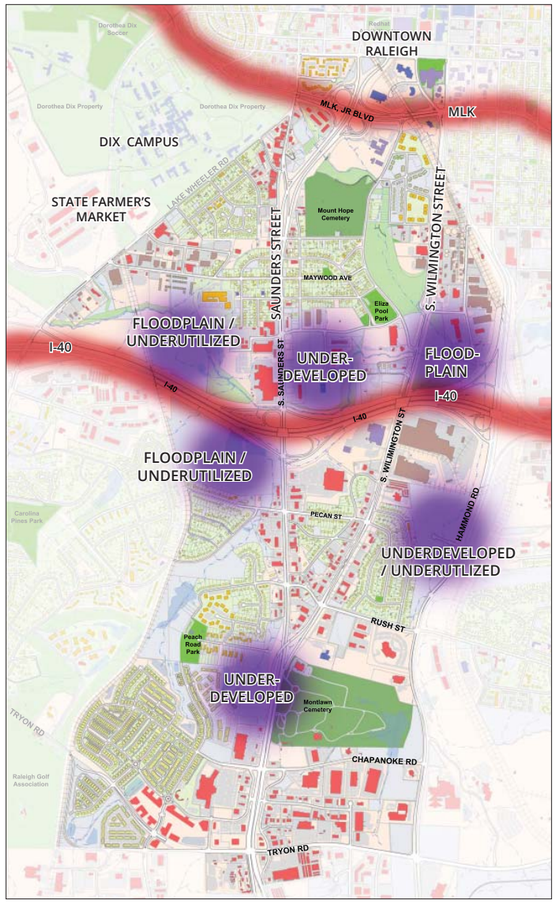
The Southern Gateway Study Area includes a large area of land south of Downtown, but is mostly focused on improvements along a 3-mile stretch of the S. Saunders and S. Wilmington Street corridors, shown highlighted in red on the adjacent graphic.

Public Input

The first major public outreach for this corridor study entailed a series of six Mobile Information Sessions held at sites throughout the study area on March 10, 11, and 12, 2015. Half of the sessions were specifically targeted toward business owners and investors in the corridor in order to better understand what attracted them to establish their business in this area and their unique concerns and needs.

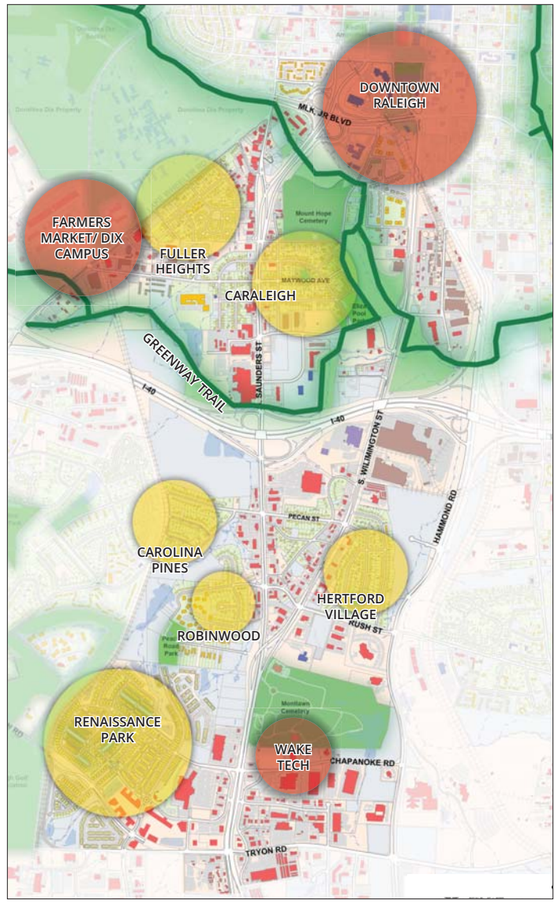
In summary, the same assets, issues and opportunities that local business owners experience daily also resonate within the broader community and neighborhood residents. A compilation of key public input is included below.

ASSETS	ISSUES	OPPORTUNITIES
- Proximity and Access to Downtown	- Speeding and cut-through traffic in some areas	- Improve secondary street network / connections
- Development Opportunities	- Lack of sidewalks and/or poor pedestrian safety	- Improve pedestrian & bicycle access / safety
- Historic neighborhoods and architecture	- Unsafe bike connections to Downtown	- Attract more residential development or improve access to adjacent communities
- Wake Tech	- Lack of street connections in some areas	- Focus on workforce housing
- Transit Access	- Unsafe intersections along S. Saunders St	- Improve access management & signaling along major streets
- Parks and Community Centers	- Interchanges act as Barriers	- Improve access & connectivity of greenways / open spaces
- Access to Greenway [North of I-40]	- Crime and Safety	- Examine underdeveloped sites for their ability to transform Image & Character
- New housing at Renaissance Park	- Homeless Camps and Panhandling	- Redesign ramps / merge areas to make underdeveloped land available for development
- Access to I-40	- Lack of Neighborhood-Serving Retail	- Stewardship of undevelopable lands to maintain natural areas and deter crime / loitering
- Proximity to Farmer's Market and Dorothea Dix Campus	- Some Blighted Commercial and Residential Areas	- Introduce additional greenway access points / trails
- Cheap Gas	- Properties "held hostage" by ramps and overpasses	- Preservation / re-use of historic resources
- Diversity	- No Greenway Connections [South of I-40]	- Protect water quality and help minimize flooding hazards by encouraging green infrastructure and/or low impact development stormwater management practices
- Views of Downtown from S. Saunders & S. McDowell Streets	- Lack of workforce housing	- Public education opportunities regarding protection of wetland / stream / floodplain areas
- Natural areas, streams and wetlands		
- Specialty Businesses		



DISTRICT BARRIERS

The character, image, and safety of the S. Saunders and S. Wilmington Street corridors negatively impact the perception of the study area. This is further reinforced by several underutilized or undeveloped properties and floodplain at key locations (indicated by purple circles above). The I-40 and MLK, Jr. Boulevard roadways serve as significant physical and perceived barriers.



DISTRICT ASSETS

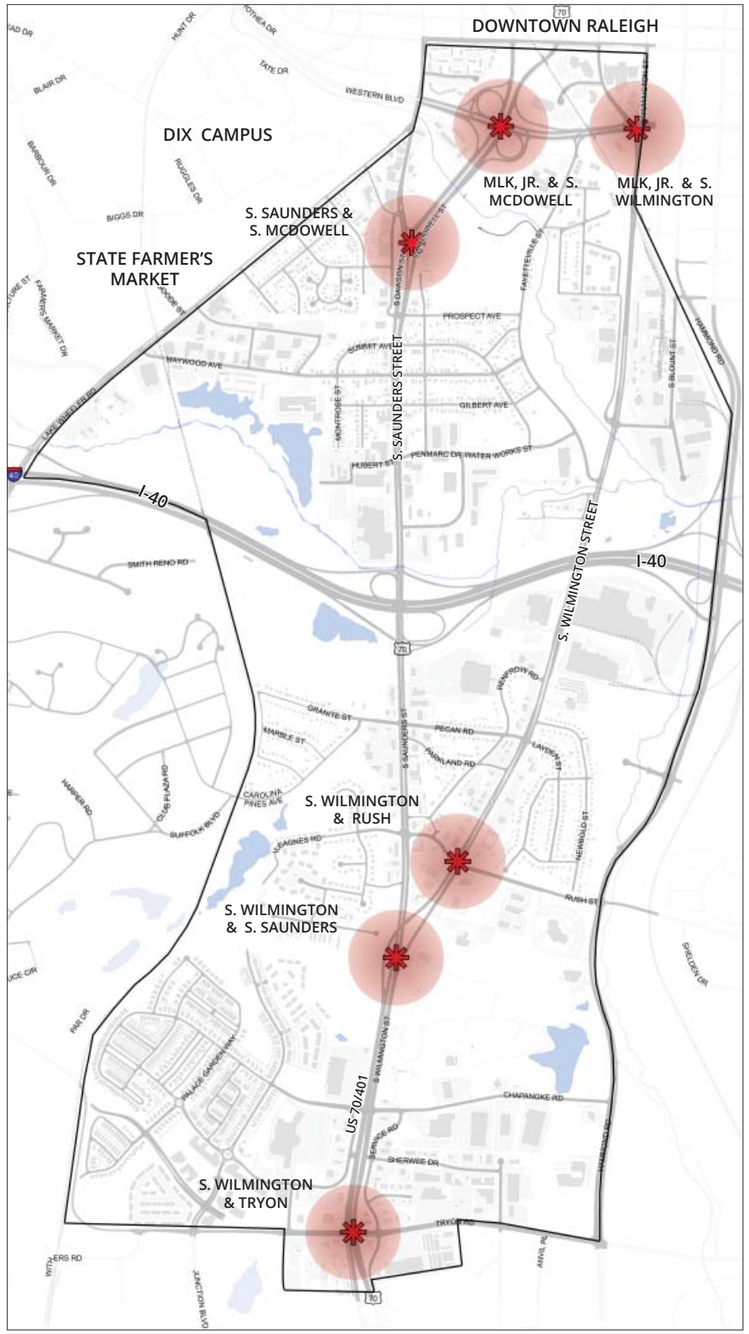
Proximity to Downtown and the City's greenway system are two key strengths of this District. The established and historic neighborhoods are also a strong benefit, but, when mapped next to the barriers (at left), one can see how the roadways and large undeveloped land areas isolate the communities from each other and from adjacent assets.

Transportation / Transit / Connectivity Analysis

The existing street network results from serving car-oriented development. North-south traffic flows facilitate downtown commuting and east-west connectivity within the district is severely lacking.

S. Saunders Street (US 70/401) serves the majority of north-south traffic. S. Wilmington Street and Hammond Road have much greater capacity than they currently carry, but generally don't serve traffic heading west or north of downtown. To the south, US 401 and US 70 conveniently feed S. Saunders Street from both the southeast and southwest, while Hammond Road only serves a relatively small market. Finally, a substantial share of traffic on S. Saunders Street is accessing I-40 while S. Wilmington Street lacks an interchange and is not a viable option for this traffic. Lake Wheeler Road functions as another north-south connection, but its capacity is limited by a narrow cross-section.

With regard to east-west travel, I-40 carries a high volume of traffic through the study area, and Tryon Road in the south, and Martin Luther King, Jr. Boulevard in the north are the primary east-west thoroughfares. All represent significant major barriers to north-south travel.



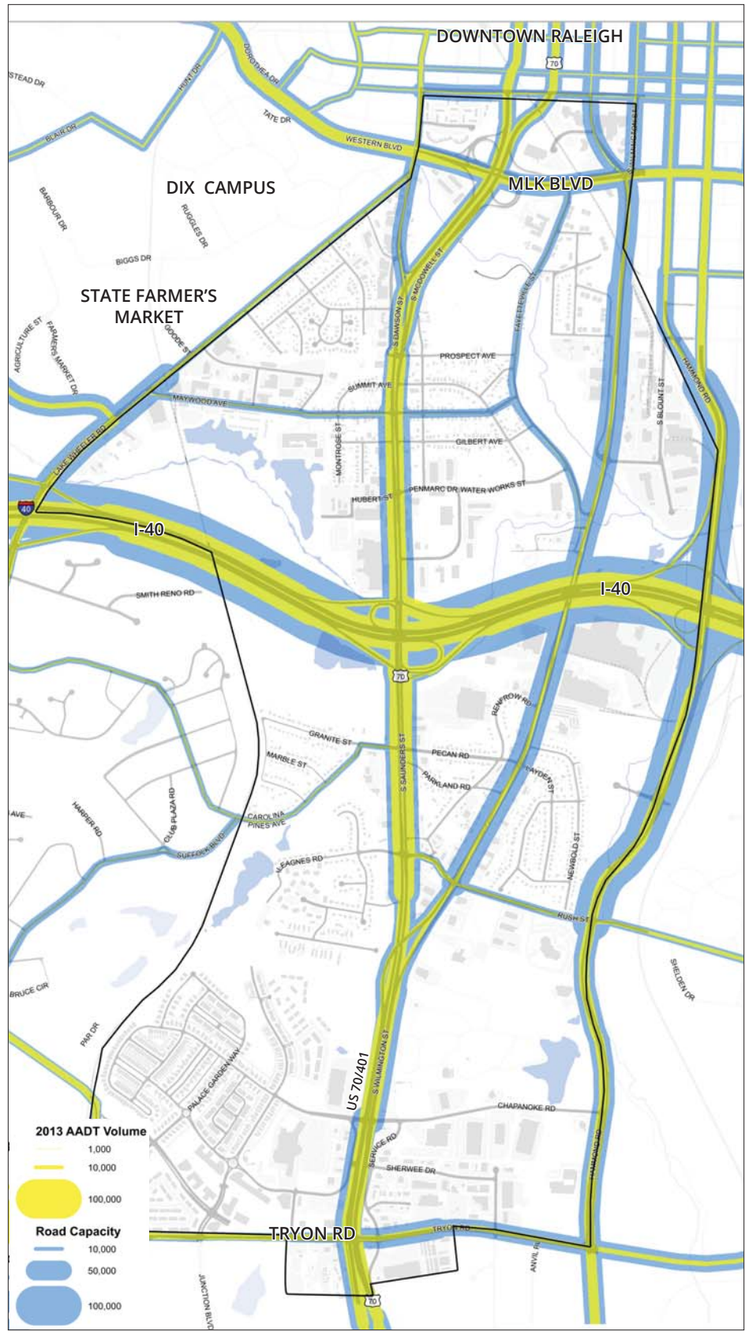
KEY INTERSECTIONS

The intersections noted represent critical junctions in the transportation network and/ or potentially important nodes for future development. Key considerations include large volumes of traffic, heavy congestion/ long delays, high crash rates, inefficient use of land, and redevelopment potential. Alternate configurations are being evaluated for ways to enhance safety, accessibility, and land use.

Access Management

Access management is critical to both S. Saunders and S. Wilmington Streets in terms of traffic capacity and safety. Long segments of these roads have partial or full control of access. S. Saunders and S. Wilmington Streets have densities of 50-100 driveways per mile, resulting in driveways comprising 20%-30% of the curb. Although medians restrict left turns along most of the length of these corridors, the confusion and "friction" introduced by these closely-spaced driveways has negative effects on all modes of travel. Additionally, the abrupt transitions between highly-controlled access to uncontrolled access violate driver expectations, increasing frustration and contributing to the high rates of observed crashes.

Other roads within the study area are narrow, local, or minor collector streets serving residential neighborhoods and older industrial developments. Many feed directly into S. Saunders or S. Wilmington Streets, adding traffic and delay. In particular, the resulting left turns create conflicts, increasing congestion and contributing to crashes.



TRAFFIC VOLUMES AND AVAILABLE CAPACITY

This graphic compares traffic demand in 2013 against estimated roadway capacity. The availability of unused north-south capacity is initially striking, given the congestion along the S. Saunders / US 70/401 corridor. S. Wilmington Street lacks access to I-40, which diminishes its usefulness to commuters. Significant deficiencies in the capacity and continuity of streets serving east-west traffic are also apparent.

ISSUES

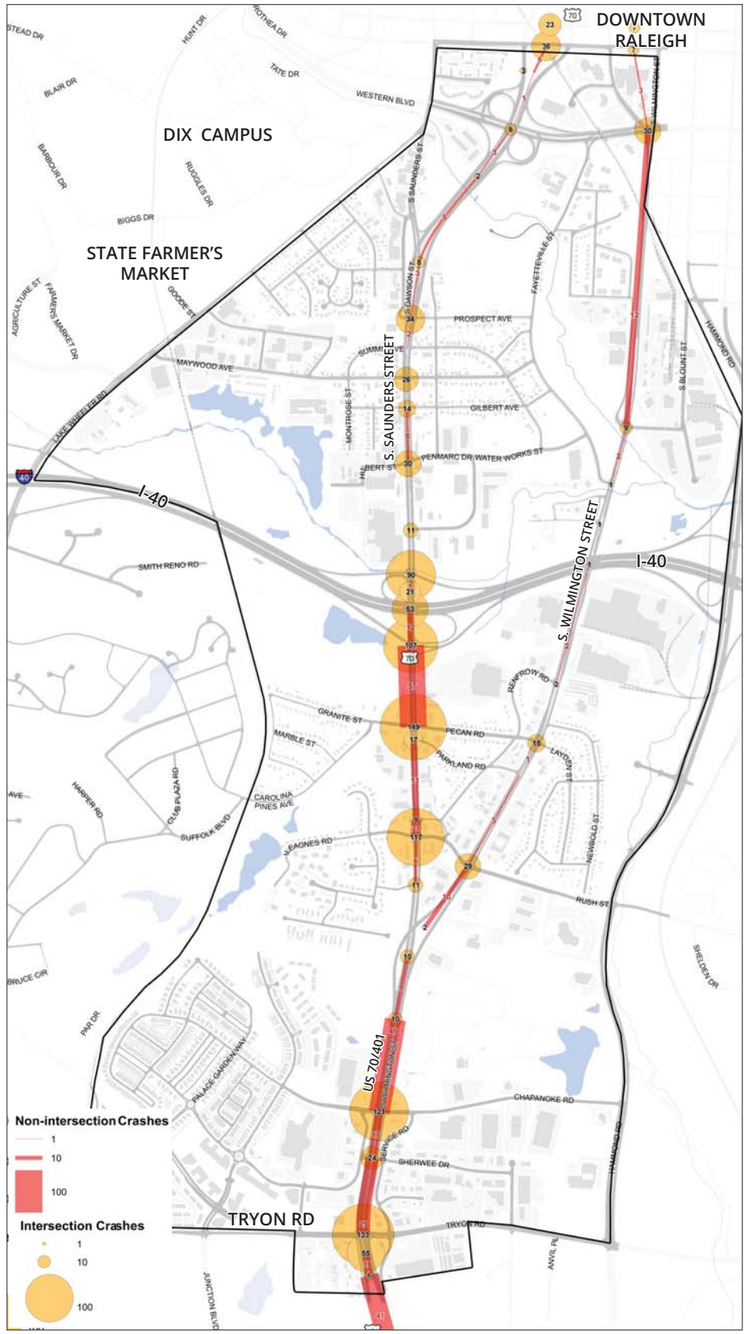
Crashes

Travel safety is a major concern in the study corridor, as expressed both by public input and analysis of crash data. During the five-year period ending in February 2015, approximately 5.5 crashes occurred each week, or approximately one crash every 30.5 hours along the portion of US 70/401 in the study area.

In the case of US 70/401, crashes occur significantly more frequently than the statewide average for the following indexes: among similar classification of road (3.5x state average), crashes resulting in fatality (2.5x), non-fatal injury and nighttime crashes (both 3x), and crashes in wet conditions (3.5x).

The total crash rate for S. Wilmington Street north of S. Saunders Street was nearly double the average rate for comparable facilities statewide, but with no fatal crashes reported.

There is a concentration of crashes in the segment between I-40 and Ileagnes Road attributable to high traffic volumes and numerous conflicts (i.e., heavy turning movements and frequent driveways). Farther south, another cluster of crashes between S. Wilmington Street and Tryon Road results from traffic merging at higher speeds, heavy weaving movements, and congestion at the Chapanoke and Tryon Road intersection. Although speed does not appear to be the primary cause of most crashes, transitions between segments with differing design speeds could be



VEHICLE CRASHES
This image dramatically illustrates the frequency and location of crashes over a recent 5-year period, distinguishing between crashes located at intersections (which tend to be more severe), and those occurring away from intersections.

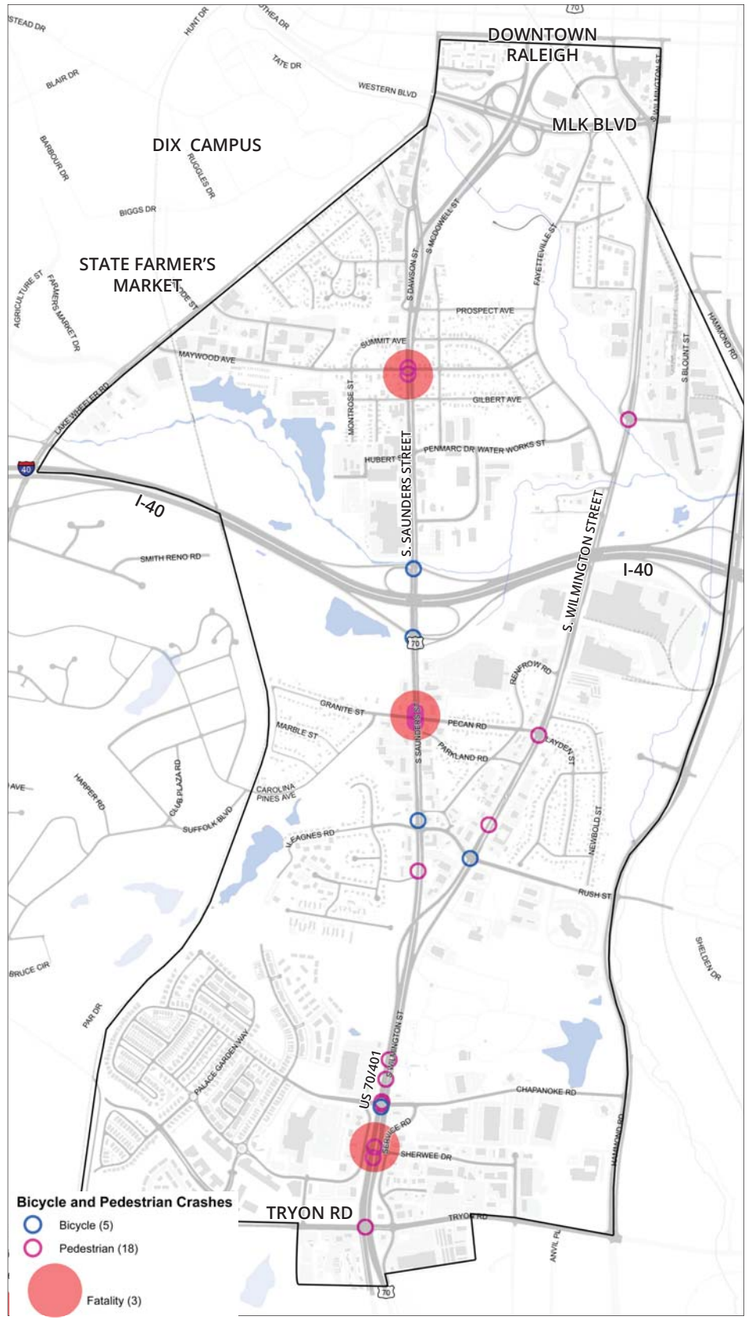
ISSUES

a significant factor. These speed differentials create difficulties in consistently judging vehicle speeds which may also contribute to pedestrian and bicycle crashes.

The number and severity of pedestrian and bicycle crashes along S. Saunders and S. Wilmington Streets is even more striking. During the five years investigated, there were 5 bicycle and 18 pedestrian crashes, including 3 fatalities. A lack of adequate pedestrian and bicycle accommodations (location, quantity and adequacy of crosswalks and signals) contributes to a more hazardous environment. Crossings associated with bus stops and frequent driveways also present significant hazards to both pedestrians and cyclists.

Most of the pedestrian crashes occurred where sidewalks currently exist which indicates that the mere presence of sidewalks is not enough to ensure safety. Pedestrian crashes are concentrated at intersections and other locations where pedestrians cross multiple lanes of high-volume, higher-speed traffic.

In addition to injury and damage costs, the high frequency of crashes has a significant negative impact on travel times since every incident uses up capacity and introduces delays that can persist long after the crash has been cleared. This also reduces the reliability of the corridor for vehicular travel, since travel times become highly variable and unpredictable.



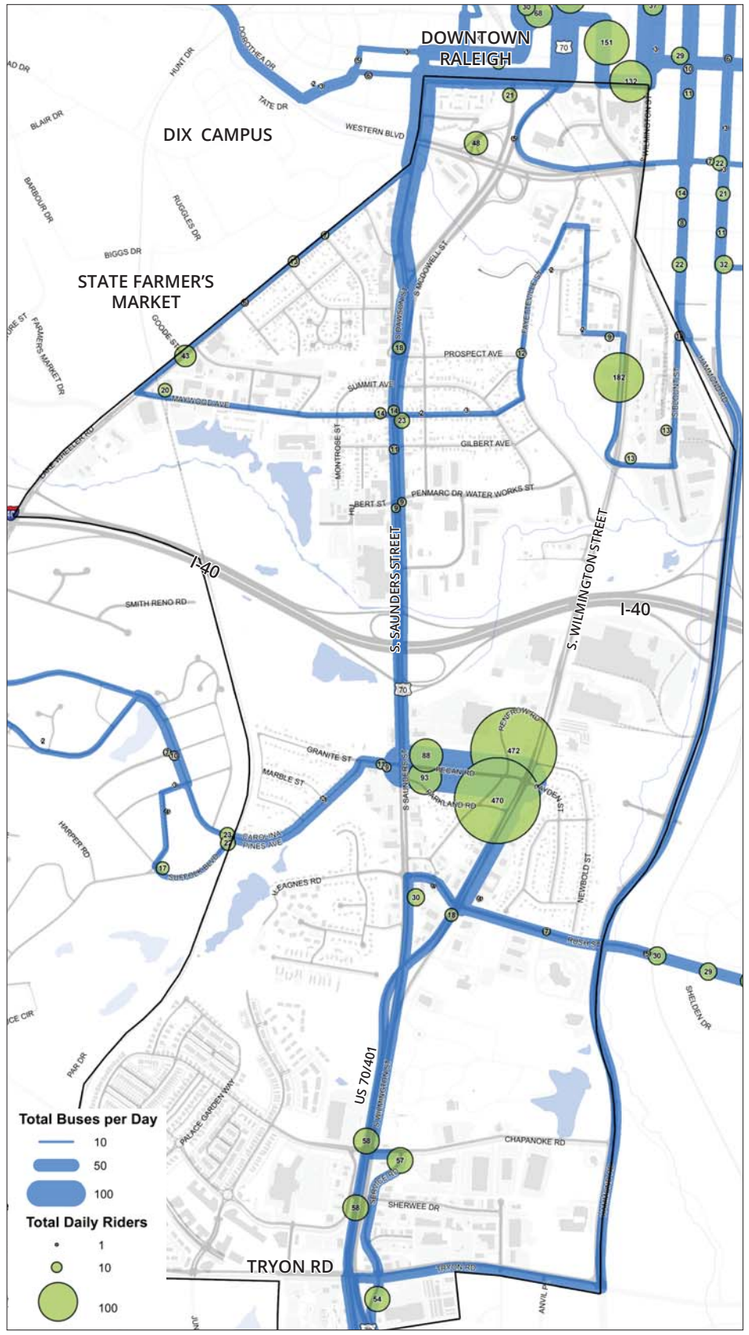
BICYCLE AND PEDESTRIAN CRASHES
This figure highlights the danger of traveling the study corridor on foot or by bicycle. Many of these crashes occurred at intersections or other locations where pedestrians have compelling reason to cross the street, but lack safe and convenient crosswalks, signals, or other appropriate pedestrian treatments.

ISSUES

Transit

The study area is served by a number of Capital Area Transit (CAT) routes, some of which are among the most heavily-used in the entire system. Triangle Transit also provides some service along the study area's eastern fringe. Although existing transit routes are within ¼-mile of most residents and establishments, this greatly overstates access to transit within the study area, due to the lack of pedestrian access. Bus stops are numerous, but rarely improved, and often lack sidewalks. Poor pedestrian access and indirect east-west connections reduce the attractiveness of local transit service as an alternate mode of travel. Additionally, frequent stops increase travel times, and long looping routes are less convenient for patrons and less efficient for operators.

Passenger demand (in terms of the number of people getting on and off buses) is highest on Pecan Road between S. Saunders and S. Wilmington Streets where numerous transfers between routes occur. Although bus shelters are present at this location, they are inadequate for the volume of passengers served, and upgraded facilities are planned. Other high-demand stops are clustered along the US 70/401 corridor in the vicinity of Chapanoke and Tryon Roads. Keeter Training Center is also a significant generator of transit trips.



EXISTING TRANSIT SERVICE AND DEMAND
This figure depicts the levels of transit service and demand. Transfers help explain the high concentration of riders along Pecan Road between S. Saunders and S. Wilmington Streets. The circuitous routing of buses is a result of the study area's lack of an efficient grid-like network of interconnected roads.

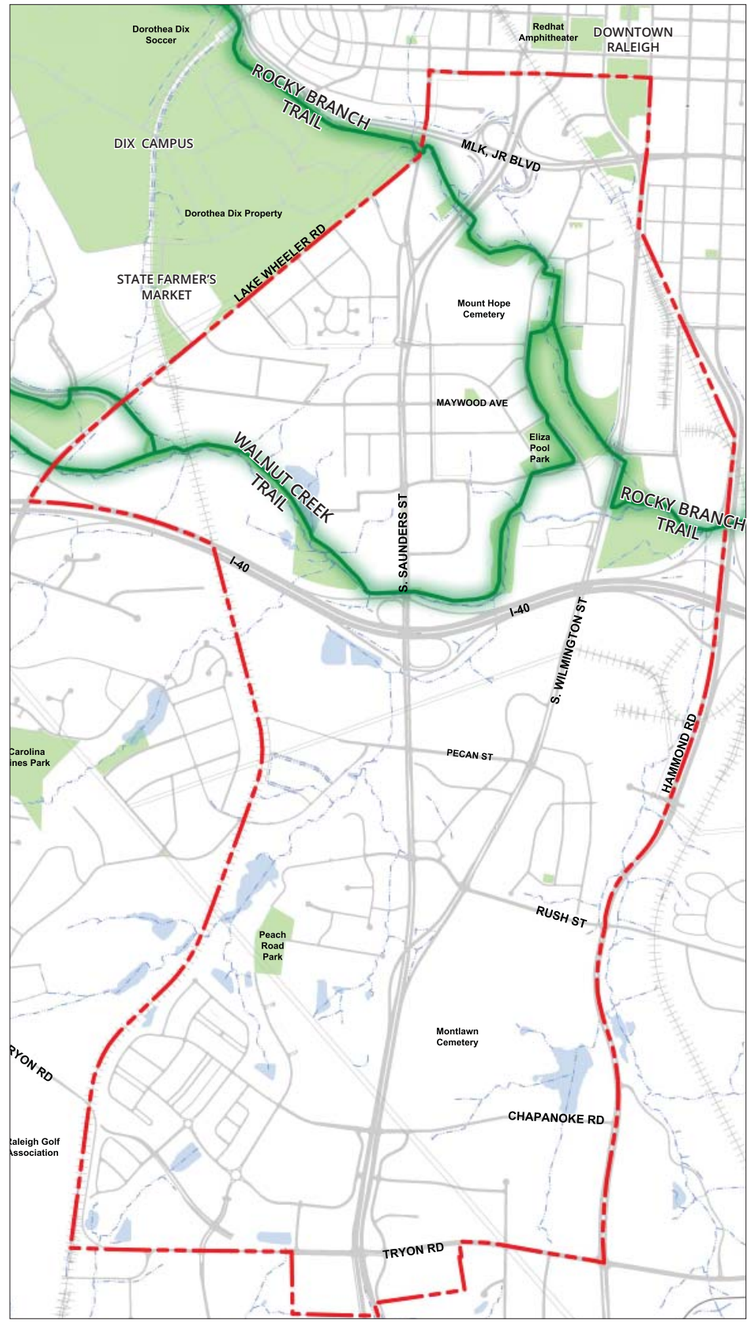
ISSUES

Greenway and Open Space Connectivity

The existing Walnut Creek and Rocky Branch Trails provide strong east-west off-road trail connections however no linkages exist to access these trails from the neighborhoods and parks south of I-40.

There are a limited number of parks and open spaces within the study area including Peach Road Park, Eliza Pool Park, Mount Hope Cemetery and Montlawn Cemetery (privately owned). Destinations closely adjacent to the study area include Downtown, Dorothea Dix campus, State Farmer's Market and Carolina Pines Park.

Public input reinforced the absence of trails and lack of connections to existing trails from areas south of I-40. Public feedback also indicated concern regarding safety along portions of the trail (i.e. trail flooding, lack of lighting, presence of homeless camps, social deviance).



EXISTING OPEN SPACE AND TRAIL NETWORK
The Walnut Creek and Rocky Branch Trails are tremendous assets that serves the northern part of the district and links neighborhoods to Dorothea Dix Campus and the State Farmer's Market as well as the broader trail network. The southern half of the study area, however, lacks access to the greenway as well as connections between its open spaces.

Development and Market Analysis

Much of the land use in the study area is commuter-oriented, strip-style commercial development. There are also many underutilized or undeveloped parcels, resulting from years of little reinvestment and limited market demand. Physical barriers (rail, roadways, and floodplain), blight, and perceptions of crime depress market interest in the corridor.

The study area's regional location and real estate characteristics offer clear development opportunities, including:

- Proximity to economically vibrant downtown core and unique views of the downtown skyline.
- Large undeveloped and underutilized parcels under single ownership.
- A strong residential foundation of established and historic neighborhoods on which to leverage.
- High level of access and visibility from regional corridors.

Demographic and employment characteristics are favorable. Population and households within the study area are projected to grow by 3% over the next five years (between 2015 and 2020). Current residents are also well-educated—with 30% possessing a Bachelor's degree or higher compared to just 24% for the nation as a whole.

The study area is also home to more than 800 businesses employing approximately 5,900 people. According to the US Census Bureau, the existing employment population represents a diverse range of occupations with approximately 45% professional or "white collar," 30% service and 25% "blue collar."

Further, the competitive development context for a wide range of potential uses—residential, retail and office—is favorable. That is, given the proven appeal and convenience of living in and around downtown Raleigh, there are very few locations within the entire region that offer similar opportunities for downtown-proximate living.

Even the southern-most edge of the study area has demonstrated the appeal of the corridor as a residential location. The Renaissance Park community—itself a redevelopment project—closed 110 new homes in 2014 at an average price of $230,000.

While market-driven development opportunities certainly exist, the study area faces obvious challenges, and it is likely that market forces alone will not be sufficient to stimulate the revitalization (see table). It is likely that private-sector development interests may require assistance in clearly identifying these opportunities.

	Context / Observations	*Opportunities*	*Challenges*
Rental Apartments	Region is approaching multi-family rental saturation; nearly 8,000 units to be delivered over the next 18 months. Of those, approx. 4,000 are in downtown.	Lots of jobs proximate to study area; easy access to downtown & regional employment centers.	Big roads; I-40 psychological & physical barrier.
		Few competitive / comparable apartment development sites with similar downtown proximity.	Development costs vs. attainable rents.
		Improving residential services.	Perceptions of safety / security.
		View of downtown skyline.	
Office	Regional job growth indicates continued office demand.	Vibrant, naturally occurring tech / start-up / creative industry employment clusters.	Big roads; I-40 psychological & physical barrier.
	Central Business District is location of choice for region's prestigious office address.	Several development sites of scale in the study area; appealing to office developers looking for downtown proximity w/out development complexities.	Development costs vs. attainable rents.
	Limited in-town development sites, high development costs present challenges for any sizable office user that wants to be in Central Business District.	Views of downtown skyline.	Not an established / prestigious office address. (This also means opportunity for the right, forward-thinking developer / user.)
For-Sale Residential	Wake County new closings up 24%.	High demand for in-town / proximate living.	No market identity, regional position unclear.
	New condo closings improving.	"Urban-Suburban" living = best of both worlds.	Current quasi-industrial context; not an "upscale" address.
	Little for-sale pipeline proximate to Central Business District.	View of downtown skyline.	Development costs vs. attainable rents.
			Perceptions of safety / security.
Retail	Household growth will drive increased retail demand, pushing retail development into new locations.	Other uses - apartments, office, single family development - will drive retail demand in the study area.	Image / Current industrial context.
	Study area a "food desert".	Large sites under single ownership (possibly) receptive to redevelopment.	Current income levels & density does not reflect future market demand.
		High visibility.	Development costs vs. attainable rents.
		Potential inflow from commuters.	Perceptions of safety / security.
			Limited walkability / foot traffic.
Other Uses, Civic & Waterfront	Growing & healthy region driving demand for variety of uses (biking, walking trail, parks, event venues).	Central location within the region & great regional access.	Study area is vast - how to achieve greatest impact unclear.
		Potentially well-positioned for a variety of destination uses.	Development costs.
			Current industrial context.
			Perceptions of safety / security.

The technical analysis and the public input work together to establish design principles for use through the remainder of this process. Several themes are emerging that provide exciting opportunities for development within the study area. The following pages outline the major framework ideas impacting economic development, character, transportation, transit, anad connectivity.

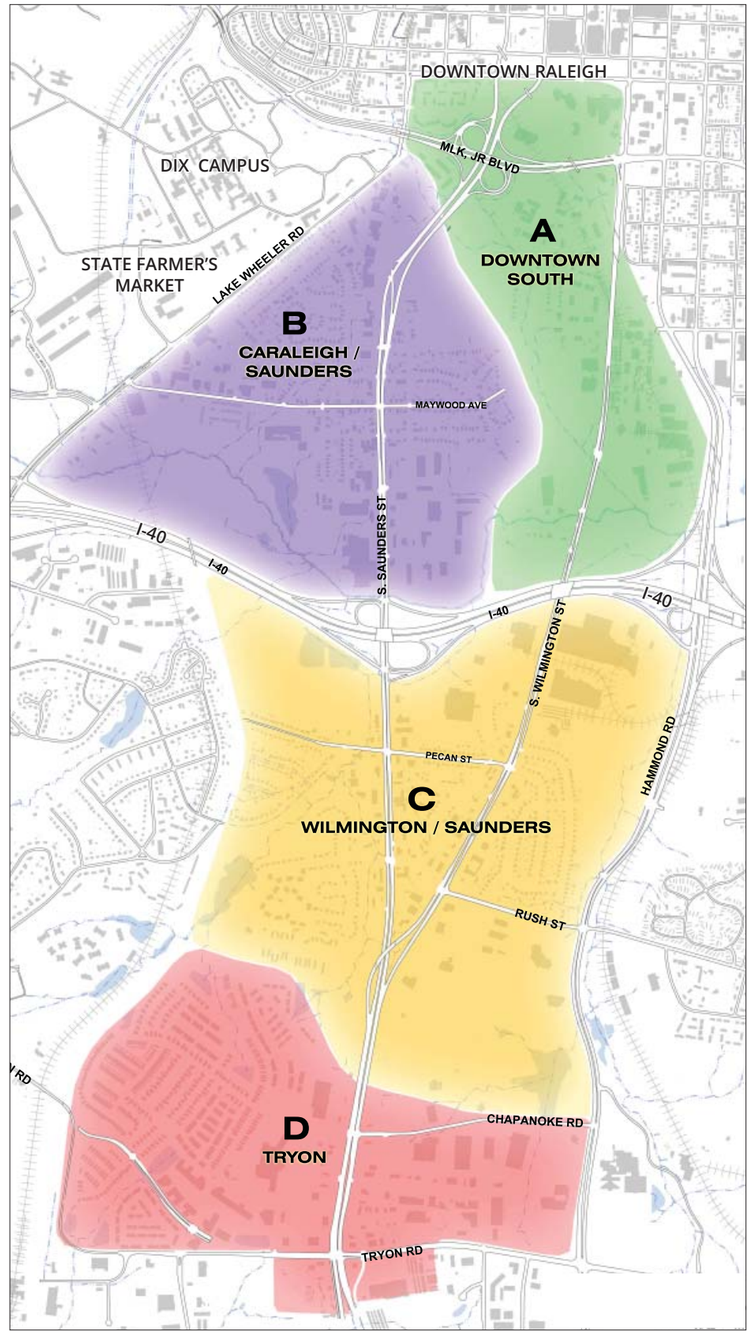
1. Identify sub-districts that can inform character, sub-market, and serve to break the study area into manageable chunks.
2. Establish development focus areas to connect communities and provide much-needed, walkable services.
3. Concentrate public and private investment in strategic locations in order to bolster market interest.
4. Support district character with appropriate urban design typologies.
5. Improve transportation safety through traffic, transit, and bike/ pedestrian improvements.
6. Improve connectivity to greenways, parks, and open spaces.

Identify Sub-Districts

The study area has been divided into four distinct development zones, or “sub-districts” with their own unique identity and opportunities for development. Caraleigh/ Saunders relates to the historic neighborhoods, Downtown South capitalizes on an in-town connection, Wilmington/Saunders identifies an area of opportunity, and Tryon refers to the Renaissance Park development and the commercial opportunities around it.

An emerging development strategy for the corridor focuses on properties abutting the major roadway corridors guided by the following strategic initiatives:

- Leverage the study area’s proximity to Downtown.
- Link City infrastructure investments with redevelopment priorities
- Promote market driven development opportunities
- Encourage new residential development
- Introduce neighborhood retail and services at targeted focus areas
- Concentrate investments around locations.



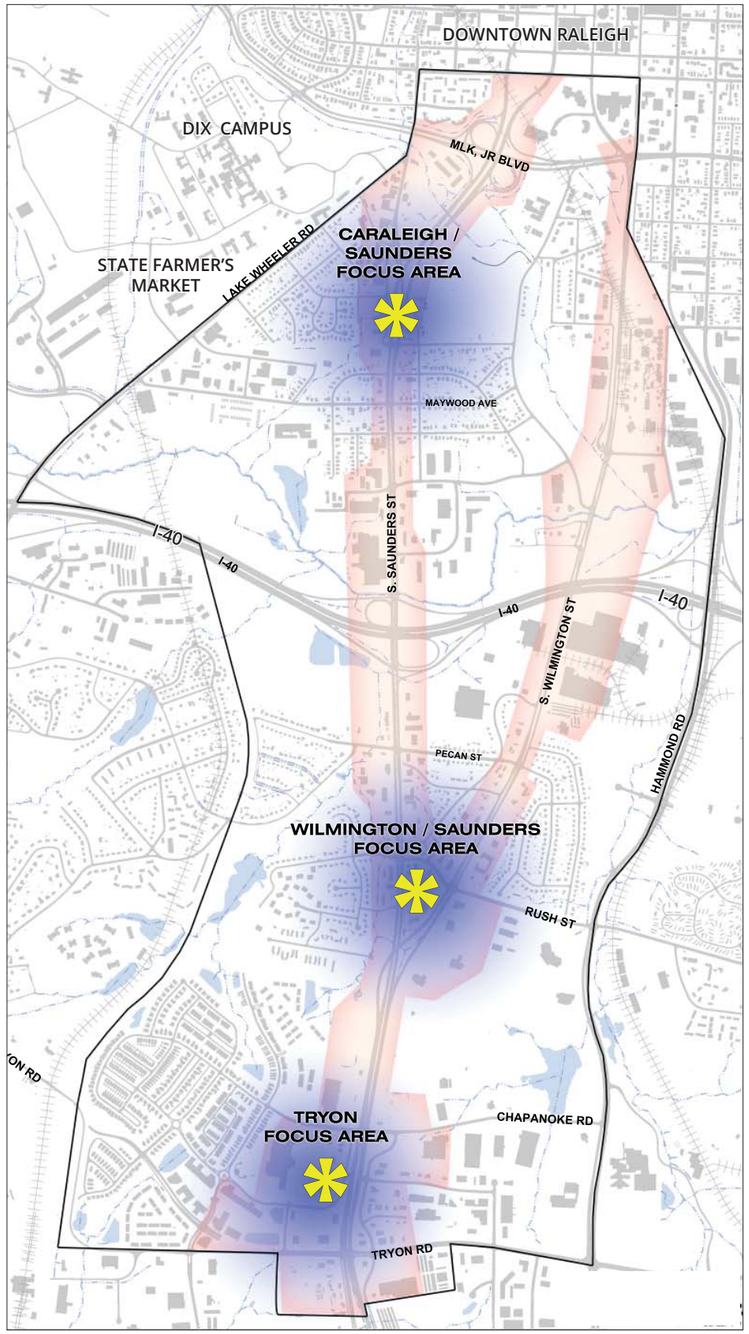
SUB-DISTRICTS

Establish Development Focus Areas

The study area does not promote a strong sense of place, neither as a destination nor a district, and it lacks retail services to support the existing residential neighborhoods. Therefore, the most fundamental organizing motif for this process will be localized centers that help concentrate investment, development, and placemaking. These centers would promote a mix of residential, office and retail uses adjacent to established neighborhoods.

Three target locations, each with its own scale and character, are identified as focus areas for development. They can take various physical forms and are unique in scale, complexity and architectural style depending on their location and context.

- **Caraleigh/Saunders** will borrow character and scale from the existing warehouses and adjacent historic neighborhoods.
- **Wilmington/Saunders** will capitalize on the convergence of S. Saunders and S. Wilmington Streets to create a vibrant core, linking several isolated communities and breathing new life into this part of the study area.
- **Tryon** will continue to capitalize on the large number of commuters passing by each day, while better serving the Renaissance Park community.



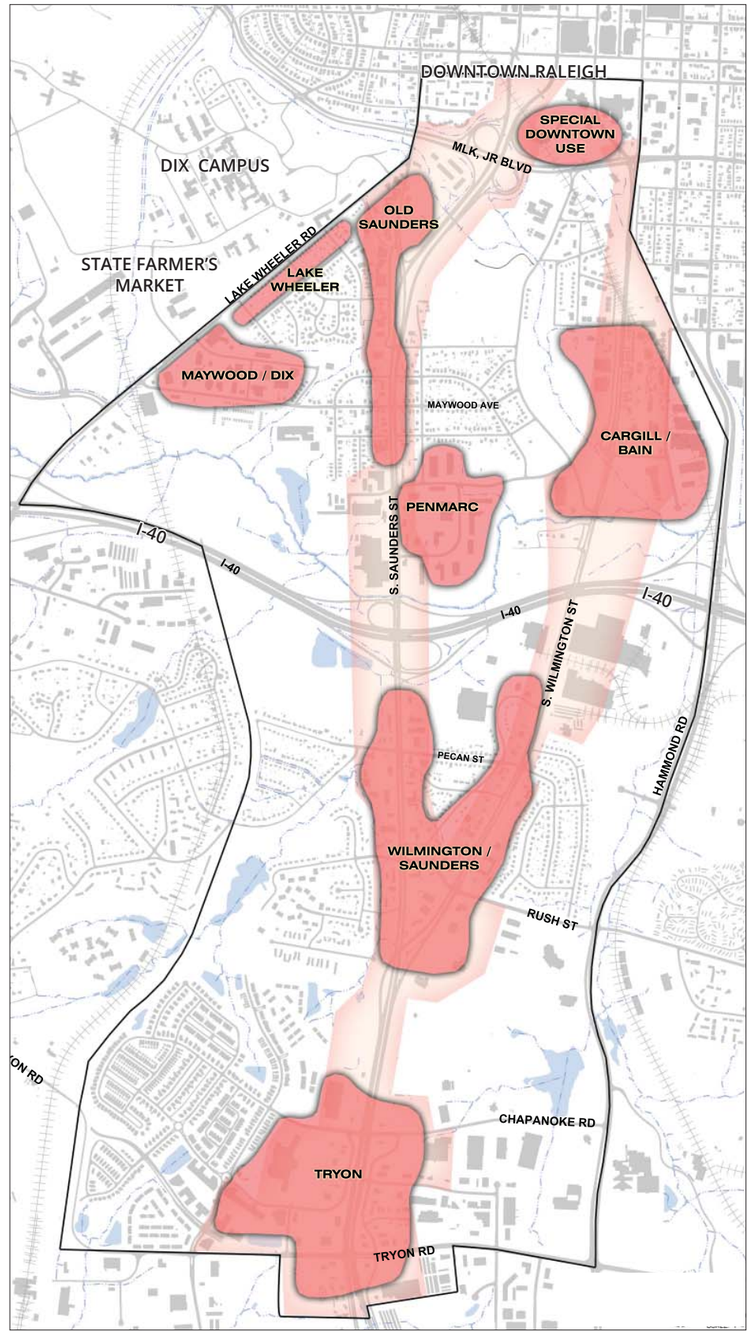
FOCUS AREAS

Concentrate Investment in Key Areas

Emerging Study Areas

Following on the idea of creating focus areas, capital investment should be directed to selected areas to catalyze future development. This involves identifying opportunity sites within the district where development can be implemented more easily and limited funds can be channeled.

It is likely that investment here will continue to further market interest within the study area, and, therefore, is a priority. The diagram identifies opportunities for redevelopment of existing commercial sites, repositioning of smaller parcels into larger development parcels, and the development of raw or underdeveloped land. These areas will be the subject of further design study.

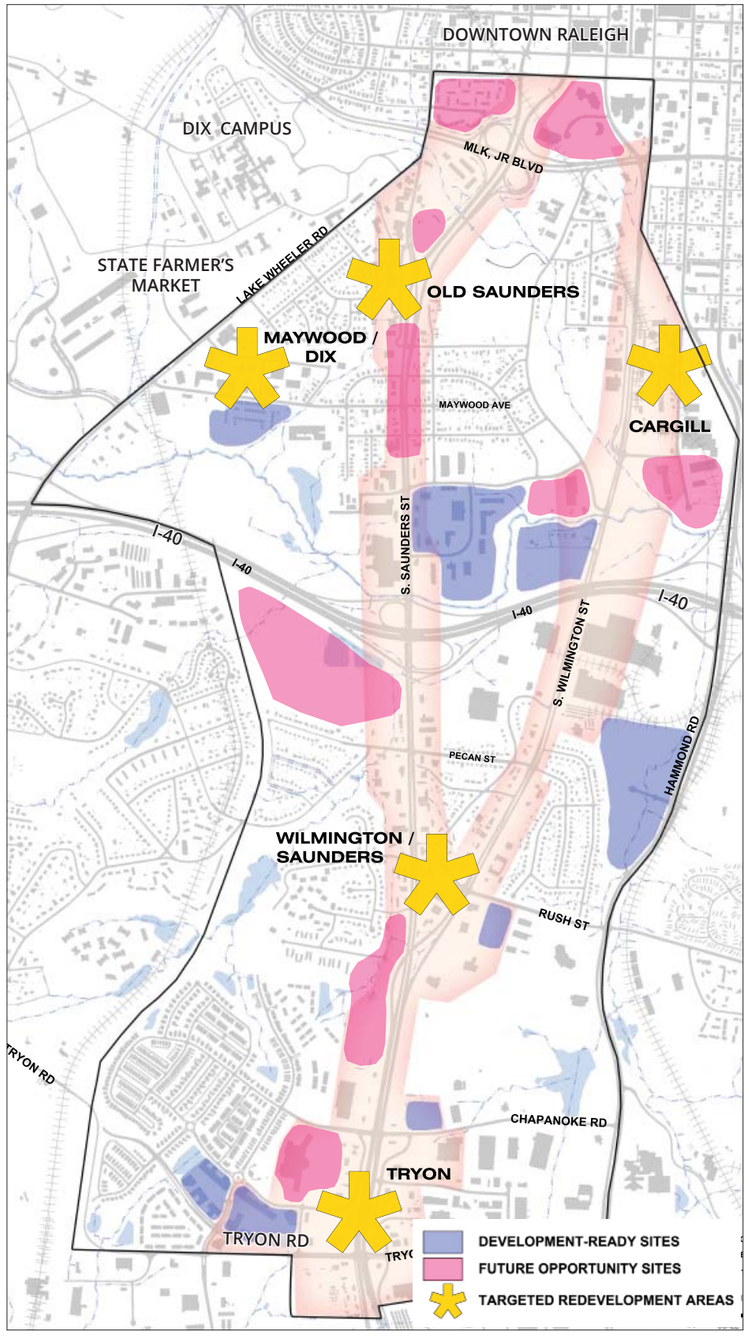


EMERGING STUDY AREAS

Concentrate Investment in Key Areas

Emerging Opportunity Sites

The study area offers many investment opportunities for redevelopment. Five focus areas (indicated by yellow asterisks in the accompanying graphic) have been identified as key locations for concentrated infrastructure improvements and targeted private investment.



OPPORTUNITY AND DEVELOPMENT SITES

Support District Character with Urban Design Typologies

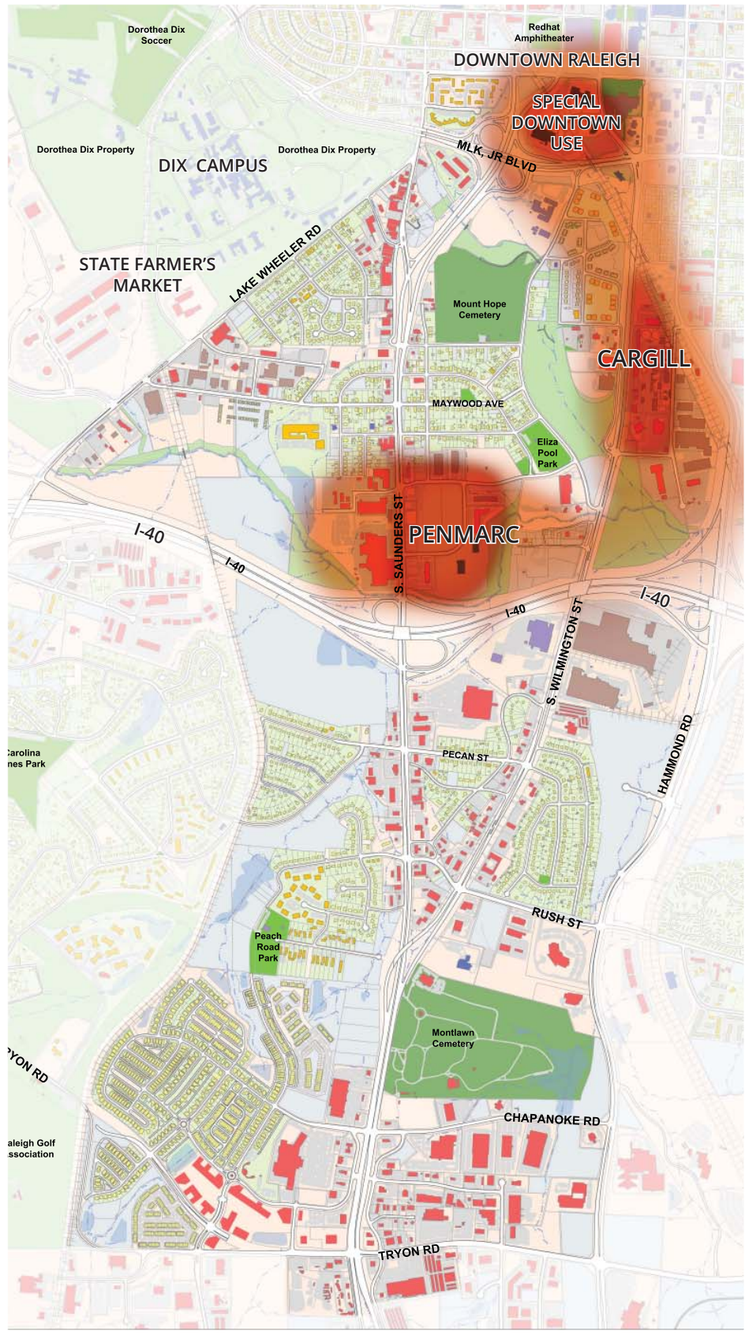
In order to reinforce the character of individual sub-districts and provide guidance for larger redevelopment projects, the following design typologies have been identified as appropriate for different applications within the study area: Urban Scale, Neighborhood Scale, Industrial Conversion, Town Center, and Boulevard Commercial.

Each of these typologies describe a character and scale of development that can accommodate a variety of uses, respond to changing market, and provide flexibility. They also inform the character of public investment in streetscape, public open space, and transit facilities.

Urban Scale Development

Larger scale walkable development screens the noise and traffic from I-40. Opportunities include the Penmarc redevelopment site and other large sites along S. Wilmington Street.

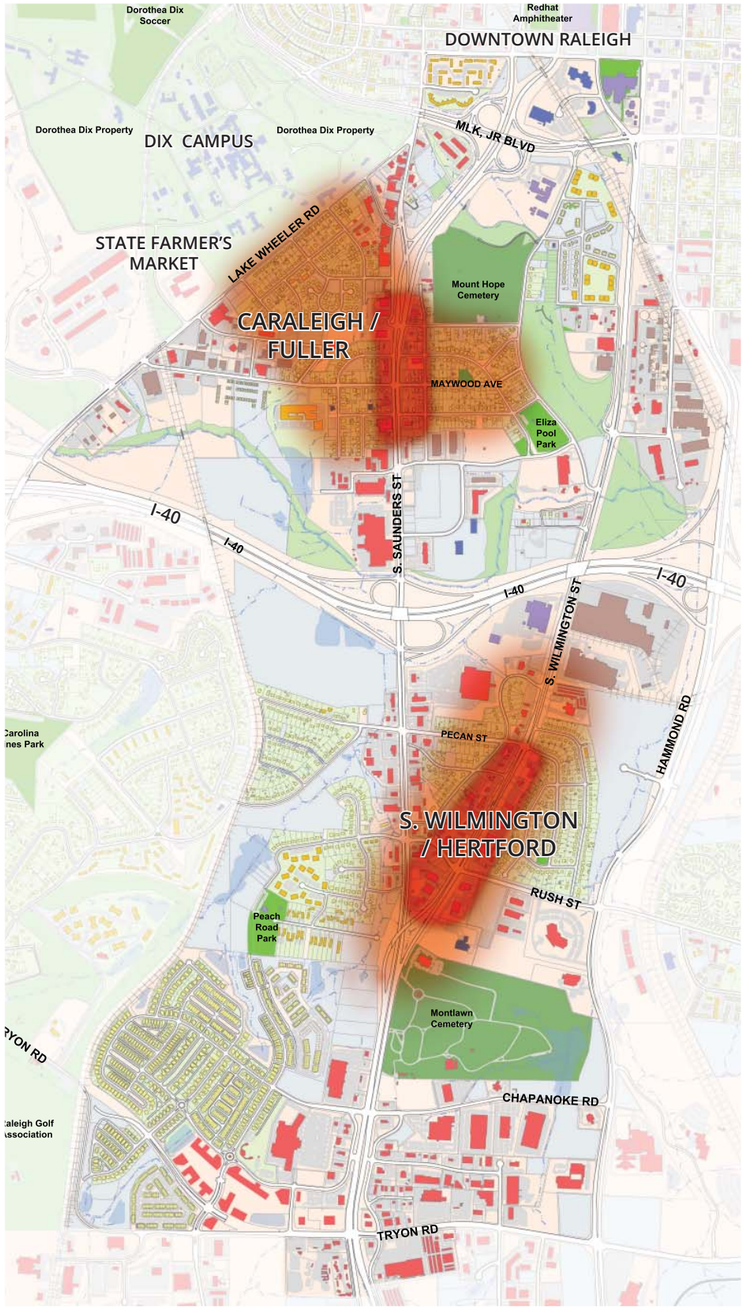
URBAN SCALE



Support District Character with Urban Design Typologies

Neighborhood Scale Development

Low- to mid-scale development adjacent to existing neighborhoods, providing local services, entertainment and residential development to capitalize on bike / pedestrian and transit connections. The character of this development typology strives to maintain compatibility with adjacent historic neighborhoods in terms of building scale and streetscape.

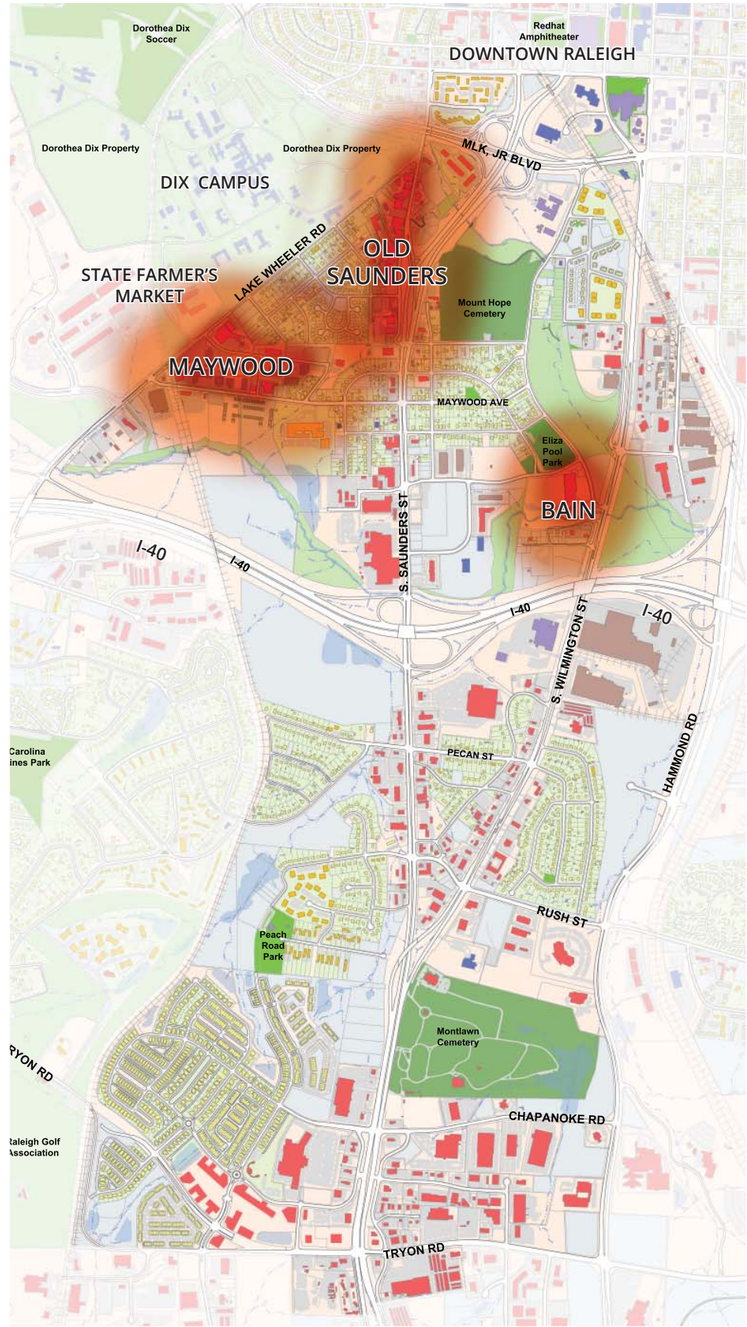


NEIGHBORHOOD SCALE

Support District Character with Urban Design Typologies

Industrial Conversion

Capitalize on local "maker" movement to provide unique services. This typology supports the innovative re-use of warehouse and light industrial buildings as well as underutilized industrial space to support emerging designers, trades and craftsmen.

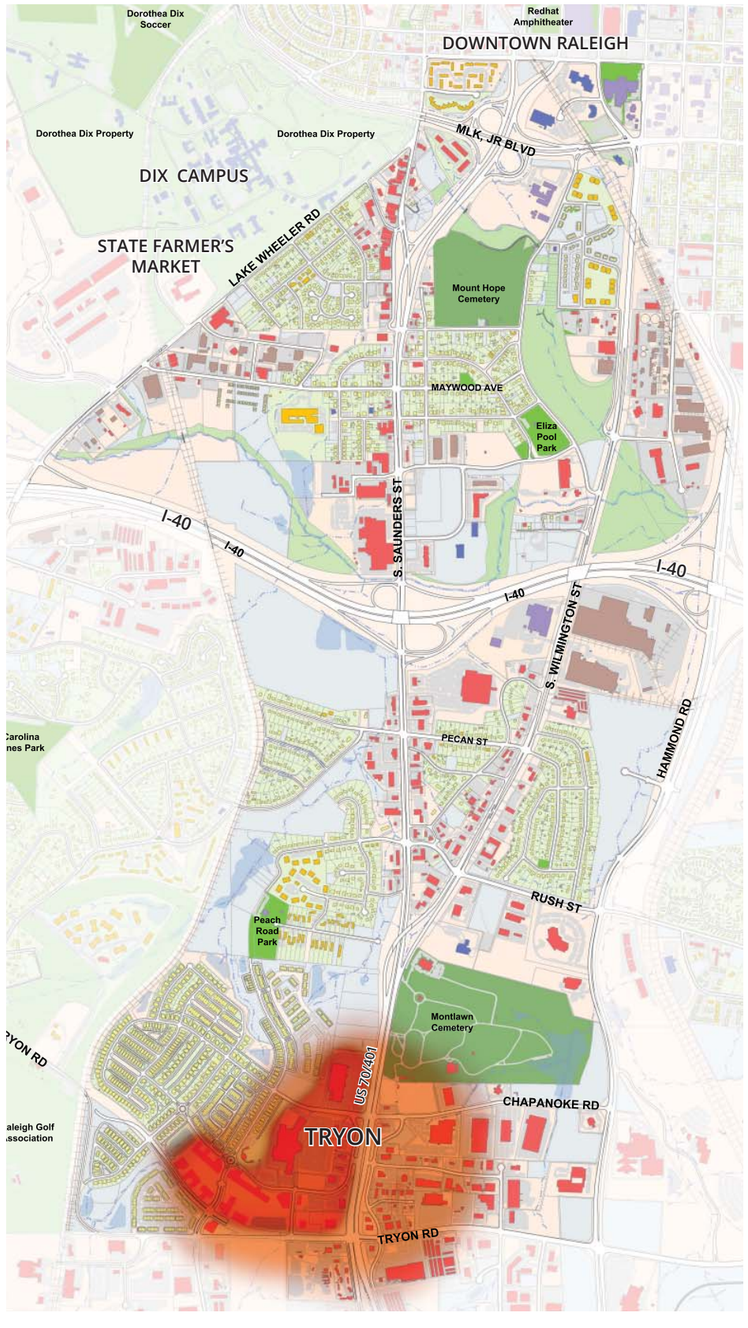


INDUSTRIAL CONVERSION

Support District Character with Urban Design Typologies

Town Center

Build on the existing retail/ commercial center that is emerging at Tryon Road and US 70/401 by employing placemaking to create a more multi-modal and mixed-use experience.

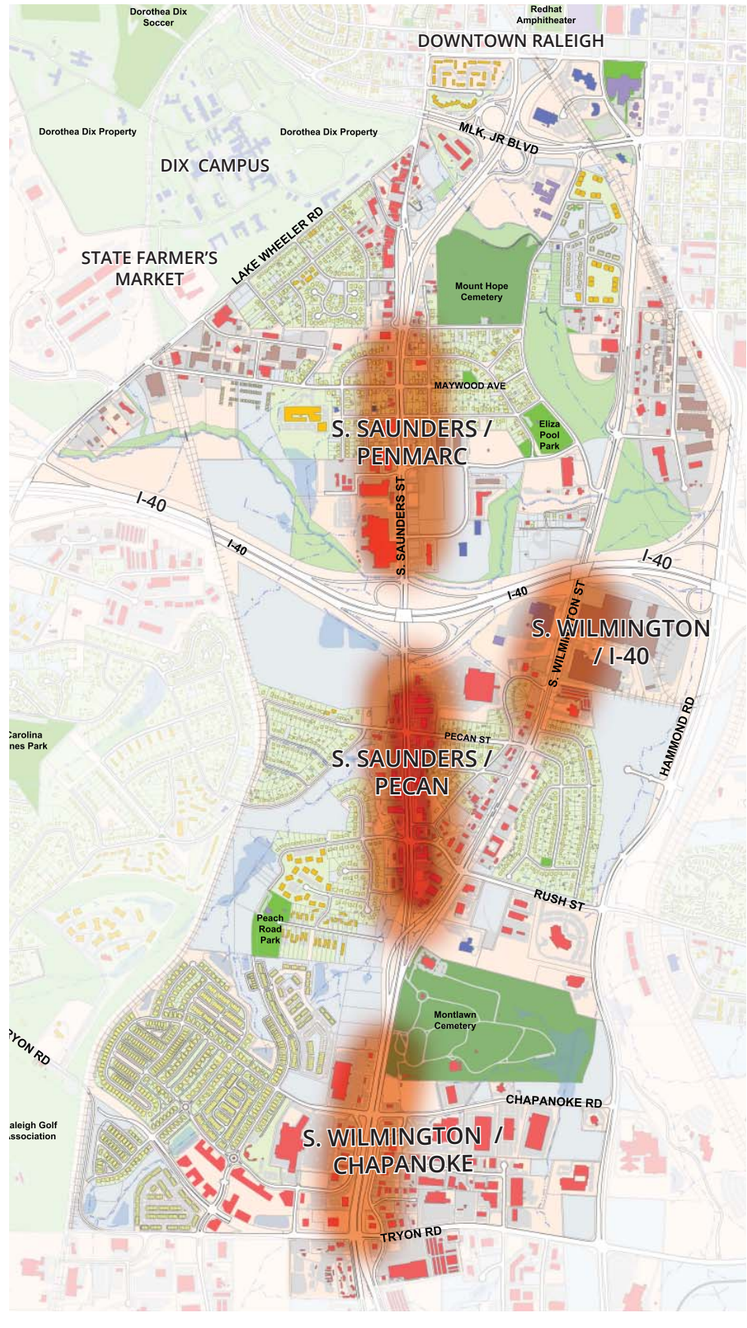


TOWN CENTER

Support District Character with Urban Design Typologies

Boulevard Commercial

Frontage in these areas is enhanced through the implementation of landscape standards, improved streetscaping, and access management to enhance safety. The character of this typology is primarily defined by the existing businesses. Recommendations for improved street frontage and design guidelines for enhancing building facades will help provide a more unified character.



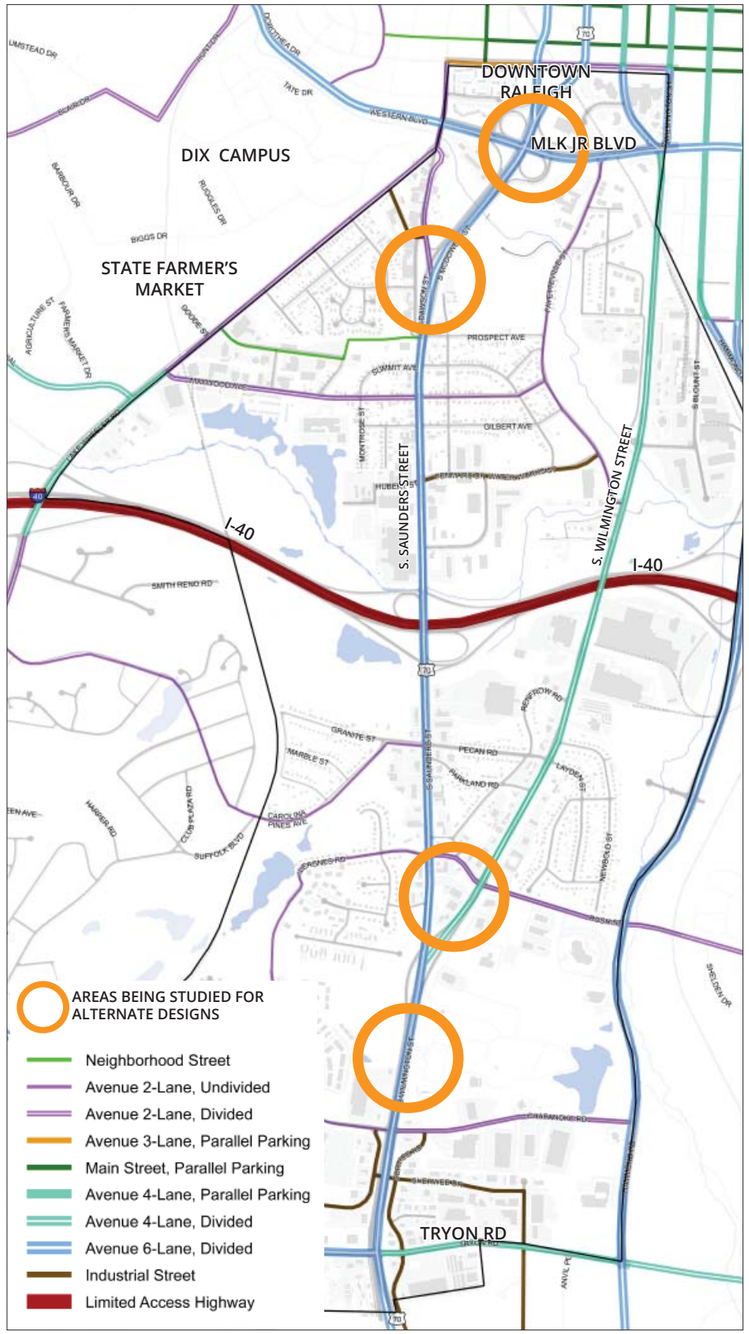
BOULEVARD COMMERCIAL

Improve Transportation Safety and Connectivity

The existing transportation system presents opportunities for improving not only safety, mobility and access, but also economic vitality, neighborhood cohesiveness, environmental stewardship, and a more vibrant and healthy community via connectivity.

In some parts of the corridor, the existing roadway occupies large land areas and may not provide as much usable capacity as was originally intended. The land tied up in providing this "false capacity" may yield more value when reallocated for pedestrians, cyclists, transit, parking, green space, or development. Alternative designs are being considered for the intersections of S. Wilmington/MLK, S. Saunders/S. McDowell/S. Dawson. and Ileagnes / S. Saunders / S. Wilmington. Opportunities between Ileagnes and Chapanoke Roads are also being investigated to improve access to underutilized parcels.

Past emphasis on vehicular mobility over personal accessibility can be reversed through careful coordination between transportation and land use, and thinking differently about transportation goals. As this planning process moves forward the team will examine the objectives of transportation within the corridor. For example, is the objective to move more vehicles faster and farther, or to increase access to jobs, goods, and services for more people? To what extent should environmental, social, and economic objectives be considered in addition to traditional measures of transportation system performance?



EXISTING STREET PLAN
(per City of Raleigh Street Plan map)

Street Typologies

Following the City's street typology recommendations, there are several options available to transform streets in order to capitalize on capacity, add functionality, and improve overall appearance.

The street typologies defined in the City's ordinance establish a street hierarchy that is contextually appropriate and supports all modes of travel.

Each of the City's street classifications is accompanied by typical street sections which provide the basis for defining character and circulation patterns.

NEIGHBORHOOD STREET

AVENUE, 2-LANE, UNDIVIDED

AVENUE, 2-LANE, DIVIDED

AVENUE, 4-LANE, DIVIDED

AVENUE, 6-LANE, DIVIDED

INDUSTRIAL STREET

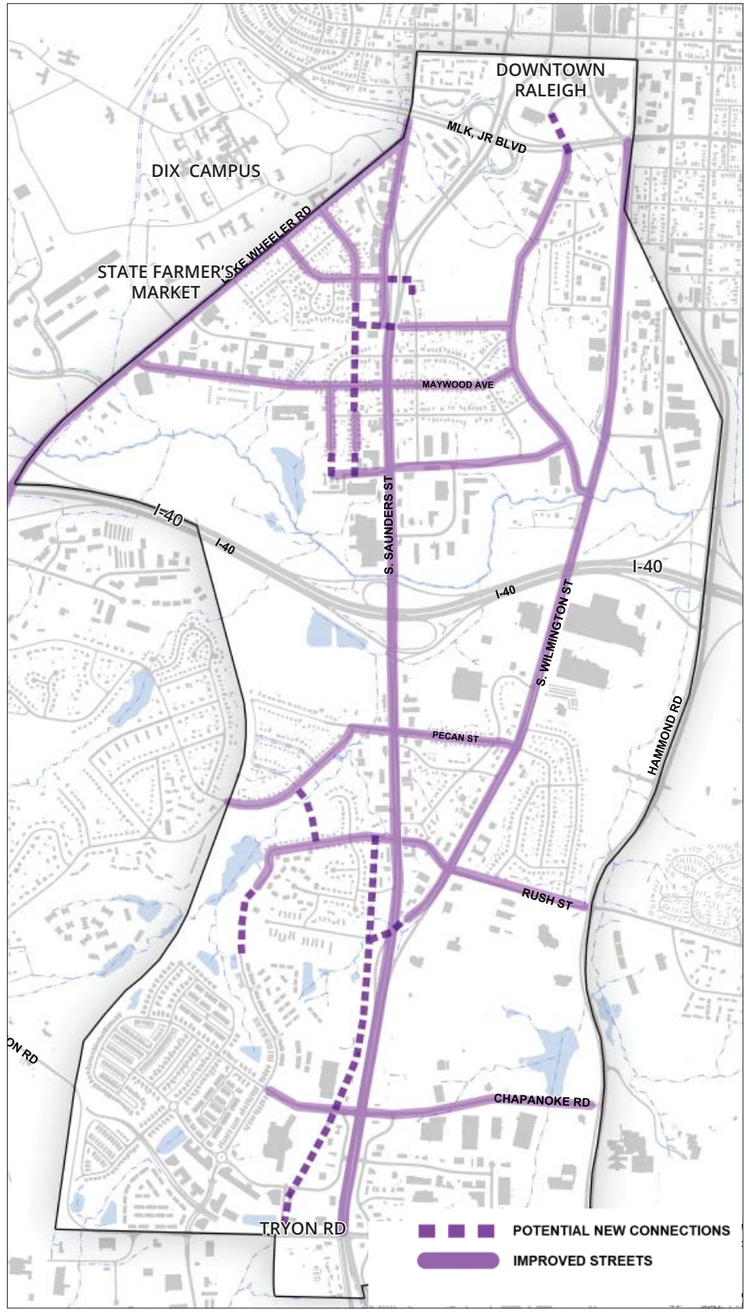
EXAMPLE STREET SECTIONS
Source: City of Raleigh Street Design Manual

Connectivity and Accessibility

It is clear from the input of residents and other stakeholders that providing a range of options for traveling to work, shopping, education, recreation, healthcare and other services is a common goal. Balanced connectivity provides alternate routes that can increase efficiency, convenience, and resilience for all modes of travel.

Increasing street connectivity can reduce vehicular travel, and keep local trips off major thoroughfares. This supports the addition of continuous parallel streets one block off of S. Saunders Street. This could also provide access management for businesses along S. Saunders Street, relocating turning movements to safer, more convenient signalized intersections at appropriate side streets. In addition to traffic benefits such designs also provide for more pedestrian and bicycle routes along narrower, lower-speed, lower volume roads, while allowing for more efficient bus access, routing, and stop locations.

Examples of improved accessibility include potential bicycle/pedestrian links across Martin Luther King, Jr. Boulevard, new sidewalks, and improved crossings. Such projects can make walking and cycling more convenient, as well as improving access to transit. Other aspects of this effort involve improvements to east-west connectivity throughout the corridor for all modes of travel, and enhancing north-south connections parallel to S. Saunders Street, typically one block back.

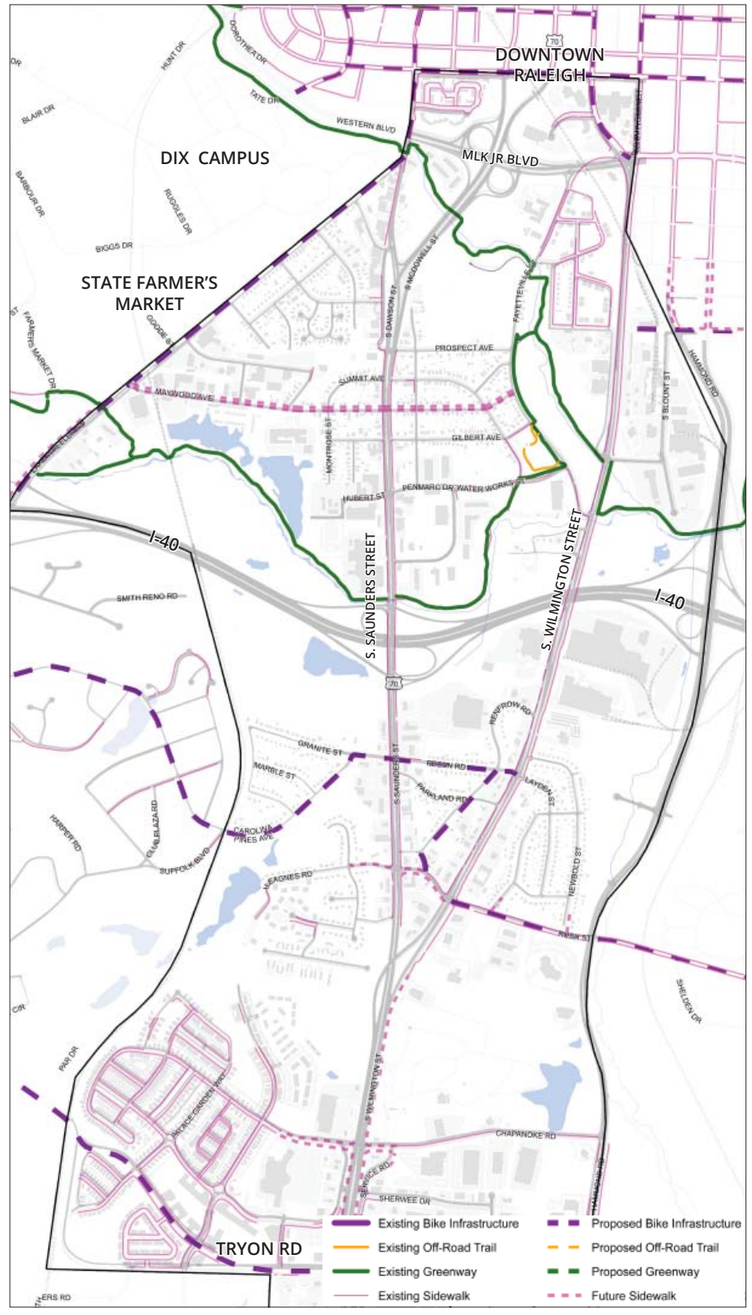


POTENTIAL STREET CONNECTIONS
Increasing or improving east-west connections while also adding improved neighborhood connections will benefit safety, walkability, and connectivity within the district, while taking some burden off of the main roads.

While most opportunities for enhancing pedestrian accessibility involve the elimination of gaps, some require overcoming the more difficult and expensive challenges posed by physical barriers, such as streams and floodplains, rail lines, I-40, MLK, Jr. Boulevard, and S. Saunders Street. Careful planning and design are needed to ensure that infrastructure improvements draw enough users to justify the expense, and are attractive additions to the urban landscape.

Safety

Reducing the number and severity of crashes, especially involving pedestrians and bicycles should be a top priority. Fortunately, many solutions that reduce safety hazards associated with traffic also yield improved walkability, community health and cohesiveness, alternative travel modes, street aesthetics, and economic vitality. In order to reduce crash rates, we recommend including access management; intersection signalization and crosswalk improvements; greater east-west connectivity; design elements to suppress excessive speeds and discourage risky behaviors; improved signage, markings, and lighting; enhanced bicycle and pedestrian facilities; and the elimination of infrastructure gaps, barriers, and hazardous conditions.



POTENTIAL BIKE / PEDESTRIAN NETWORK

Transit

Transit-oriented developments and changes to transit service can increase transit ridership in the study area. Any transit infrastructure and service improvements must be carefully coordinated with transit, roadway, pedestrian, and urban design vision.

A major emphasis of this study involves the identification of new opportunities for local, express, and fixed guideway transit service. A strong case can be made for a plan that transforms S. Wilmington Street north of S. Saunders Street into a transit-oriented corridor. There is adequate ROW and roadway capacity to add a separate transit guideway in the form of dedicated bus rapid transit (BRT) lanes, a streetcar, or light rail transit (LRT) lines. Bike lanes, cycle tracks or sidepaths could also be incorporated, along with enhanced streetscape and median treatments. It may be possible to reduce the number of traffic lanes along the corridor. Potential modifications to the intersections at MLK Jr. Boulevard and at S. Saunders Street are being developed.

Existing Infrastructure

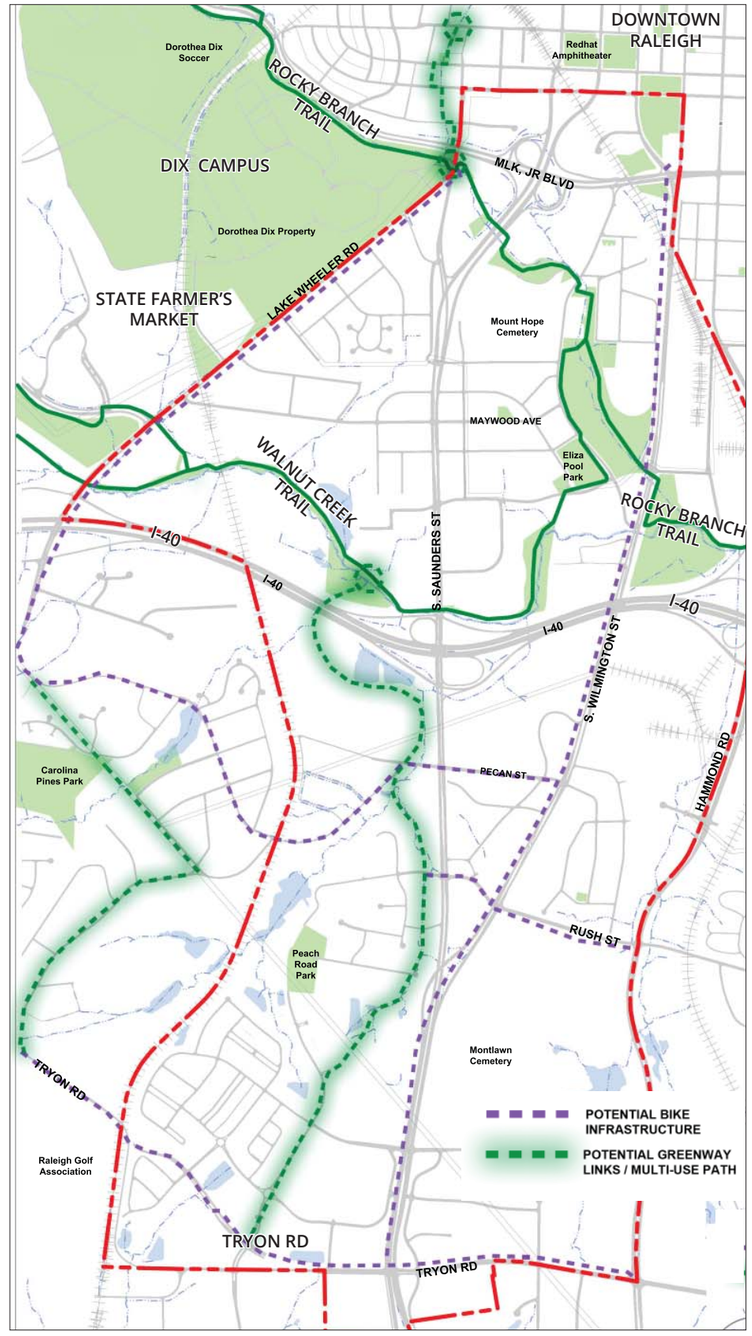
The time, expense, and risk associated with constructing new public infrastructure continue to increase, even as revenue sources dwindle, therefore maximizing efficiency of existing infrastructure is paramount. The potential impacts of travel demand management (TDM), operational optimization, new technologies, shifting demographics, and evolving travel behaviors should be incorporated into the implementation strategy.

PROPOSED TRANSIT

Improve Connectivity of Trails, Parks, and Open Spaces

The existing greenway is a distinct asset for the area, however, residents south of I-40 lack access to this significant amenity. In order to improve greenway and open space connectivity, Linkages should be created among neighborhoods, parks and development areas.

As potential alignments and connections are identified, both public and private development can participate in the realization of greenway extensions or multi-use paths.



POTENTIAL BIKE AND OFF-ROAD TRAIL NETWORK

Through the examination of the issues and technical analysis, the design team established some general framework ideas to guide the development of design recommendations. The following outlines the frameworks with some objectives that will serve as the basis for specific design alternatives.

Transportation / Transit

- Improve safety for pedestrians and bicyclists, while reducing crashes of all types.
- Provide a wider range of travel (mode) options.
- Transform S. Wilmington Street into a major transit / bicycle / pedestrian-oriented corridor.
- Reduce impacts of traffic and roadways on the community.
- Shift focus from moving vehicles *through* the study area to providing *access* to residents, jobs, schools, goods, and services through a variety of route and mode choices.
- Develop a comprehensive mix of short / medium / long-range recommendations for all modes.
- Improve pedestrian and bicycle access to transit
- Integrate new transit-friendly development with future rail / bus rapid transit plans.
- Enhance comfort, safety and visibility of bus stops.
- Increase efficiency and effectiveness of bus service.

Connections

- Improve east-west connectivity.
- Reduce barriers for access to destinations within and adjacent to the study area for all modes of transport.
- Address safety concerns for pedestrian / bicycle / greenway users.
- Improve existing infrastructure to address image and usability.
- Establish criteria for new development to address lack of facilities / improve existing facilities.
- Expand greenway linkages, particularly south of I-40.
- Prepare for future transit alternatives by providing additional pedestrian / bicycle facilities and linkages.

SUMMARY / NEXT STEPS

Development Strategy

- Explore new land development patterns.
- Leverage corridor's proximity to downtown.
- Link redevelopment with infrastructure improvements.
- Market driven development opportunities.
- Introduce neighborhood oriented retail and services.
- Coalesce investments around strategic corridor locations.
- Support existing communities through nodal development in focus areas.

Image and Character

- Celebrate and reuse historic resources and natural resources.
- Conscientiously transition at edges of traditional neighborhood fabric.
- Provide a variety of experiences that help differentiate and reinforce identity of communities.
- Ensure that each character type is supporting multi-modal infrastructure: pedestrian, bicycle and transit experience.
- Adopt a proactive approach to beautifying public spaces and street edges.

The themes and considerations that emerged from this process will inform the development of design alternatives which will be tested against existing conditions, future planning initiatives and market suitability. This design effort will take place throughout the Summer of 2015 culminating with a Design Alternatives Public Workshop in Fall 2015.